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(54) Abstract Title

Aqueous deodorising and freshening composition containing chlorine dioxide, quaternary ammonium compound, hydrogen peroxide, ethyl/isopropyl alcohol and fragrance

(57) A deodorising and freshening composition contains an aqueous solution of chlorine dioxide, a quaternary ammonium compound, stabilised hydrogen peroxide, either ethyl or isopropyl alcohol and one or more fragrances.

This composition may be applied to Fabrics, Textiles, Clothing, Suede, Leather and other substrates, including hard surfaces, to destroy and remove unpleasant odours and leave the substrate with a clean/fresh odour.

The composition may be applied via soaking, compressed air atomisation, trigger or finger sprays, and aerosol sprays using liquefied or compressed gas, eg liquefied petroleum gas, dimethyl ether, or compressed nitrogen, carbon dioxide or nitrous oxide gas.

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This print takes account of replacement documents submitted after the date of filing to enable the application to comply with the formal requirements of the Patents Rules 1995

## FABRIC DEODORISER & FRESHENER

This invention is an aqueous solution which when applied to Fabrics, Textiles, Clothing, Suede/ Leather & other substrates including hard surfaces will destroy and remove unpleasant odours.

The current technology of fabric deodorising involves the use of Cyclodextrines, Fragrances and Mechanical Devices.

This invention uses a combination of an aqueous solution ; containing , Chlorine Dioxide, Quaternary Ammonium, Stabilised Hydrogen Peroxide, which attacks and destroys odour bearing compounds. Ethyl or Isopropyl Alcohol is used to assist with deodorisation & improve volatilisation. A Fragrance is used to leave the substrate with a clean/fresh odour.

The application of this invention can be via; Soaking, Compressed Air Atomisation or Trigger / Finger Spray, Compressed Air ( either manually or mechanically) and Aerosol Sprays using liquefied or compressed gas.

## CLAIMS

1. **A Fabric Deodoriser & Freshener**, when applied to Fabrics, Textiles, Clothing, Suede/ Leather & other substrates including hard surfaces will destroy and remove unpleasant odours. Containing an aqueous solution of **Chlorine Dioxide, Quaternary Ammonium Compound, Stabilised Hydrogen Peroxide, Ethyl/Isopropyl Alcohol and Fragrances**.
2. **A Fabric Deodoriser & Freshener**, in Claim 1 wherein Chlorine Dioxide functions as the active ingredient which destroys unpleasant odours by a chemical reaction.
3. **A Fabric Deodoriser & Freshener**, in Claim 1 and Claim 2 wherein the Quaternary Ammonium Compound functions as a wetting agent, a bactericide and an emulsifier.
4. **A Fabric Deodoriser & Freshener**, in Claim 1, Claim 2 and Claim 3, wherein the Ethyl Alcohol functions as a bactericide and volatilisation aid.
5. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claim, wherein the Isopropyl Alcohol functions as a bactericide and volatilisation aid.
6. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the Fragrance functions as initially masking any un-attacked odours and finally remains to leave the substrate with a pleasant odour.
7. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is Soaking the offending the article in the solution.
8. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by a Compressed Air Atomising System.
9. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by a Trigger Spray.
10. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by a Finger Spray.
11. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by an Aerosol Spray using Liquefied Petroleum Gas as a propellant.

12. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by an Aerosol Spray using Dimethyl Ether as a propellant.
13. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by an Aerosol Spray using Compressed Gas (N<sub>2</sub>).
14. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by an Aerosol Spray using Compressed Gas (CO<sub>2</sub>).
15. **A Fabric Deodoriser & Freshener**, a composition according to any proceeding Claims, wherein the method of application is by an Aerosol Spray using Compressed Gas Nitrous Oxide (N<sub>2</sub>O).



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Application No: GB 9916770.2  
Claims searched: 1-15

Examiner: Stephen Quick  
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**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.Q): A5E (EBB)

Int CI (Ed.6): A01N

Other: Online: EPODOC, JAPIO, WPI

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
A	GB 1435228 A (W HURKA), see page 2, lines 29-32, 62-68 & 82-83	
A	WPI Abstract Accession No 1991-112620/16 & JP 030052802 A [1991], see abstract (antibacterial composition containing chlorine dioxide, hydrogen peroxide and ethyl/isopropyl alcohol)	-

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

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